

What we claim is:

1. Method for recycling used-up plastic products comprising steps of :

crushing the used-up plastic product;

5 washing the crushed plastics;

drying the crushed plastics; and

feeding the crushed plastics into molding line directly without pelletizing to make a re-molded plastic products.

2. Method as defined in claim 1, wherein the molding line  
10 includes a injection molding machine of which nozzle has a filter to remove foreign matters from molten plastic of crushed one.

3. Method as defined in claim 1 or 2, wherein the used-up plastic product is a plastic component of Film with Lens Unit.

4. Method as defined in claim 1 or 2, the re-molded plastic  
15 product is a plastic component of Film with Lens unit.

5. Method for washing a crushed plastics comprising steps of :

crushing the used-up plastic product to make crushed plastics;

20 making a mixture of the crushed plastics and washing liquid in a washing tank; and

flowing back the mixture into the washing tank to make spiral flow therein.

6. Method as defined in claim 5, further comprising a step  
25 of mixing bubbles in the washing liquid.

7. Method as defined in claim 6, wherein mixing bubbles is made by feeding air into the flow back to the washing tank.

8. Method as defined in claim 7, the feeding air is made by

air intake induced by negative pressure of the flow.

9. Apparatus for washing crushed plastics comprising:

a washing tank formed with a tubular shell portion and a conical bottom portion for receiving a mixture of crushed plastics of used-up plastic product and washing liquid which includes a sink hole in the bottom portion into which the mixture is to flow;

a circulation pipeline for flowing back the mixture into the washing tank one end of which is connected to the sink hole and the other end portion is disposed near and approximately along the inner wall of the washing tank so as to make a spiral flow; and

a washing liquid feeding pump outlet of which is connected to the circulation pipeline via a discharging pipe to make backflow of the mixture in the circulation pipeline toward the washing tank by feeding washing liquid into the circulation pipeline.

10. An apparatus as defined in claim 9, wherein plural of holes are formed on the tubular shell portion of the washing tank, through which the crushed plastics of the smaller than predetermined size pass to be removed.

11. An apparatus as defined in claim 9, further comprising:

an air intake for mixing bubble disposed between the sink hole of the washing tank and the washing liquid feeding pump outlet, in order to feed the bubbled washing liquid to a nozzle port of the circulation pipe.

12. Apparatus as defined in claim 9, wherein the washing liquid is hot water.

13. Apparatus as defined in claim 9, the crushed plastics

is from a plastic component of used-up Film with Lens Unit.

14. Method for recycling used-up plastic products comprising steps of

coarse-crushing used-up plastic products;

5 separating the crushed plastics from other foreign matters;  
fine-crushing the separated plastics;

washing the fine-crushed plastics by the process using a circulation flow including a spiral flow in which interaction between crushed plastics helps themselves clean without

10 washing agents;

drying the washed plastic;

removing metallic matters mingled in the crushed plastics by using metal detector; and

feeding the dried crushed plastics directly to an injection  
15 molding machine of which nozzle part is equipped with a filter and a flow-switching mechanism for cleaning the filter by backwash reverse filtration.

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